

**DEPARTMENT of ENVIRONMENTAL SERVICES**  
**Water Supply & Pollution Control Division - Biology Bureau**

**LAKE TROPHIC DATA**

**MORPHOMETRIC:**

Lake: PATENAUDE POND	Lake Area (ha): 27.92
Town: BOSCAWEN	Maximum depth (m): 5.5
County: Merrimack	Mean depth (m): 3.2
River Basin: Merrimack	Volume (m <sup>3</sup> ): 902000
Latitude: 43°17'00" N	Relative depth: 0.9
Longitude: 71°38'29" W	Shore configuration: ---
Elevation (ft): 530	Areal water load (m/yr): 2.34
Shore length (m): 900	Flushing rate (yr <sup>-1</sup> ): 0.70
Watershed area (ha): 152.8	P retention coeff.: 0.79
% watershed ponded: 0.0	Lake type: natural w/dam

**BIOLOGICAL:**

**26 January 1995**

**18 August 1994**

DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 55%	DINOBYRON 50%
	#2	DINOBYRON 20%	CRYPTOMONAS 15%
	#3	MALLOMONAS 15%	
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			7.08
DOM. ZOOPLANKTON (% TOTAL)	#1	LRG PERITR. CILIATE 40%	KERATELLA 32%
	#2	KERATELLA 28%	NAUPLIUS LARVA 28%
	#3	POLYARTHRA 8%	
ROTIFERS/LITER		198	178
MICROCRUSTACEA/LITER		3	138
ZOOPLANKTON ABUNDANCE (#/L)		354	323
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			3.3
BOTTOM DISSOLVED OXYGEN (mg/L)		8.8	5.3
BACTERIA (E. coli, #/100 ml)	#1		10
	#2		
	#3		

**SUMMER THERMAL STRATIFICATION:**

not stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : None

**CHEMICAL:**

Lake: PATENAUDE POND  
Town: BOSCAWEN

	26 January 1995		18 August 1994		
DEPTH (m)	1.5	3.0	2.0		4.0
pH (units)	6.6	6.6	6.8		6.8
A.N.C. (Alkalinity)	8.5	8.4	6.0		7.6
NITRATE NITROGEN	< 0.10	< 0.10	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.41	0.50	0.29		0.35
TOTAL PHOSPHORUS	0.012	0.013	0.018		0.019
CONDUCTIVITY ( $\mu$ mhos/cm)	32.1	32.8	35.8		35.8
APPARENT COLOR (cpu)	35	34	33		32
MAGNESIUM			0.74		
CALCIUM			3.4		
SODIUM			1.6		
POTASSIUM			0.50		
CHLORIDE	2	2	2		2
SULFATE	3	3	3		3
TN : TP	34	38	16		18
CALCITE SATURATION INDEX			3.2		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1994**

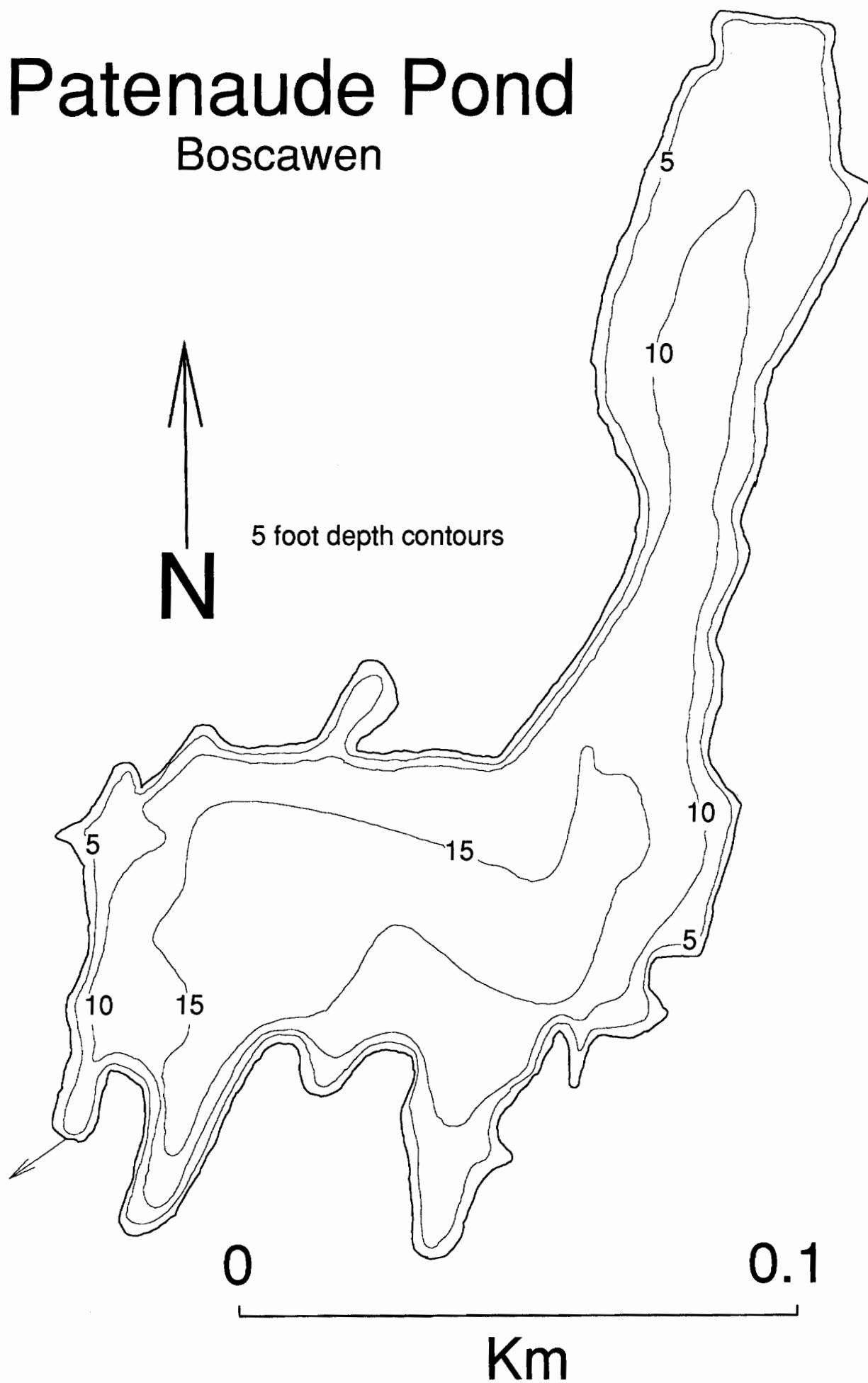
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	3	1	6	Meso.

**COMMENTS:**

1. AKA Unnamed Pond #4 and Flag Hole Pond or Flaghole Pond.
2. No public access. This undeveloped pond is completely surrounded by undeveloped privately-owned property. In 1988 the property was proposed to support 350 luxury homes and a golf course. In 1994 it was considered for a state park. In addition to the above alternate names, it was listed as Loon Lake and Lake Forest Country Club in the 1988 development plan. Although the land and pond has been open to the public for recreation in the past, at the time of the 1994 sampling access to the land was banned by a locked gate.

# Patenaude Pond

Boscawen

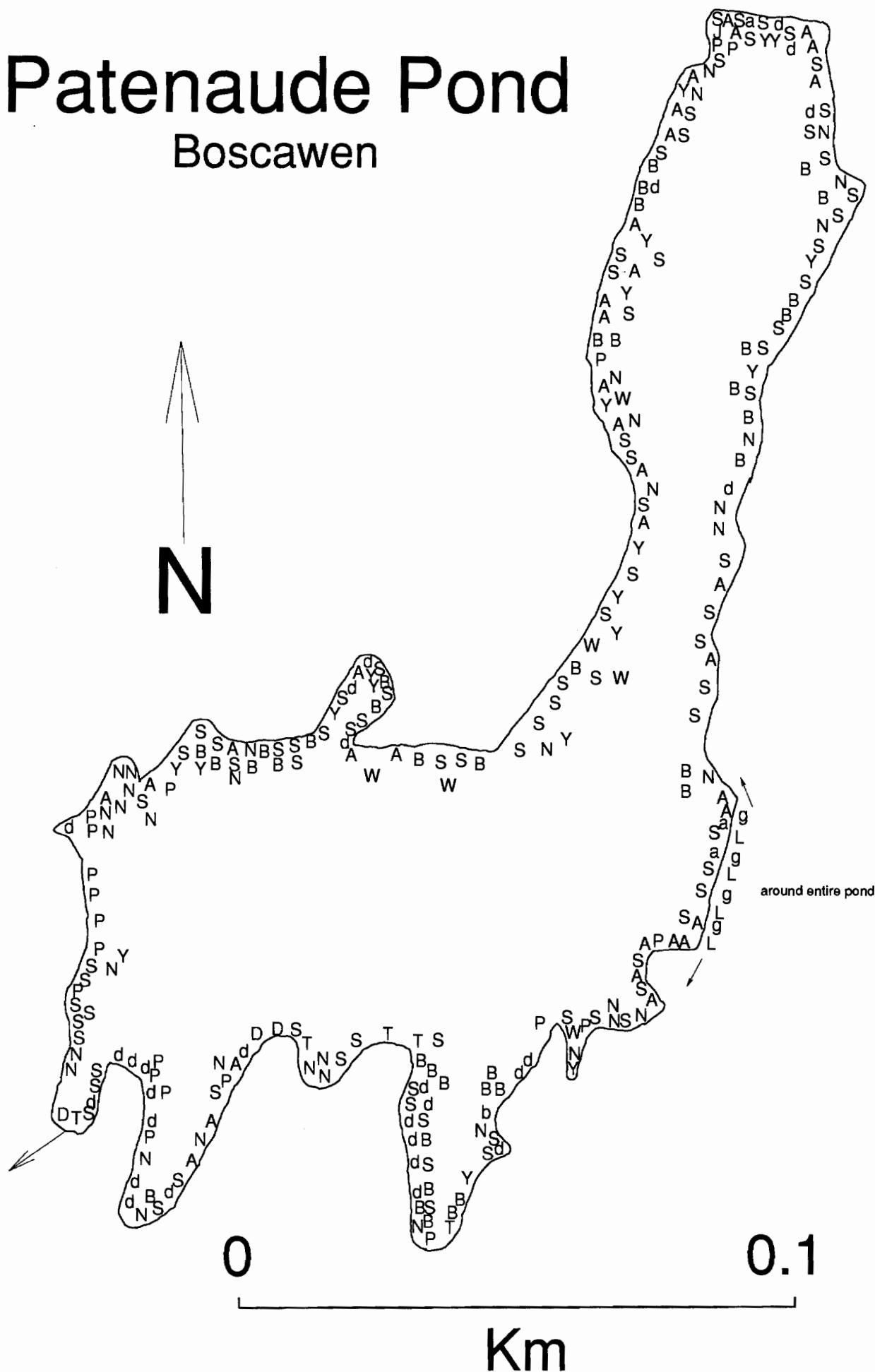


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# Patenaude Pond

## Boscawen



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